

Emery High School

San Rafael Energy Research Center Provides a Temporary Chemistry Lab for Students.



Before students did any of the lab work they used their phones to do research on cation identification

Introduction

One of the difficult things with the construction of the new school was the temporary loss of the science wing and the lab space. It is challenging to do some of the lab/demonstrations they had done in the past because it was difficult to provide a safe environment for the students. When the San Rafael Energy Research Center (SRERC) and the County Commissioners saw the need, Commissioners Sitterud and Leonard contacted the school to offer their service and facility. That's how the SRERC got involved with Emery High.

Nomenclature

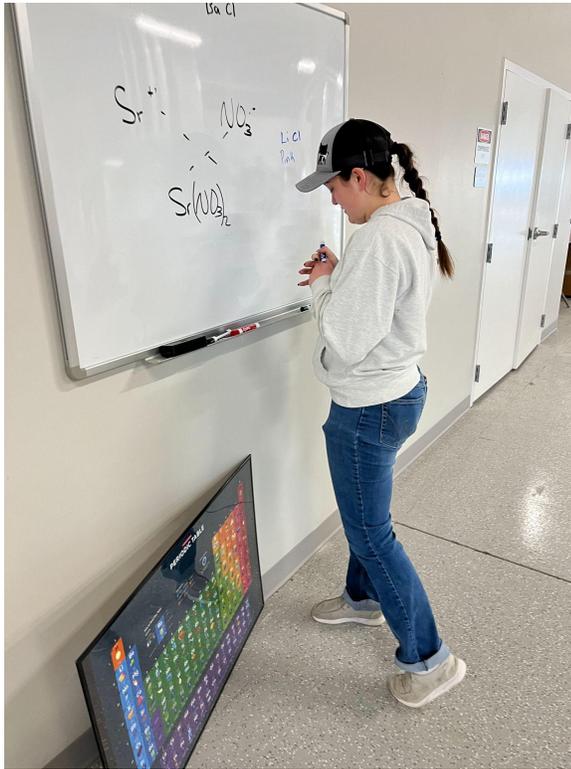
Jaron Wallace gave the students a list of possible cations that would be reactants in the "explosives" that were to be demonstrated. He then gave students time to look up these cations and their identifying characteristics like density, and visible wavelength. He then conducted controlled burns of each of the elements allowing the students to identify the unknown cations based on their observable characteristics



Jaron ignited balloons filled with different cations allowing student to predict the products.

Predicting products based on physical characteristics can be challenging. It is a simple version of CSI Emery. Students had to make inferences based on information they had researched as well as data they collected in the demonstrations.

Deri Thatcher uses a periodic table to write the ionic exchange in the binary compound produced.



The Future of Energy

What does the future hold for EHS students? It became clear from the student study at SRERC that energy has been the major economy locally and will continue in the future as well. Students were shown that our current infrastructure is important in the future, not only with our local coal fire generators, but our ability to export energy to the grid.



Dr. Jeremy Pearson explains the grid and how Emery will continue to make and export electricity

Good As Gold

One of the most popular chemistry labs is turning copper coins into silver “zinc” and gold “brass”. However popular, it is dangerous in that it is caustic and can instantaneously combust. However in the lab at SRERC the danger was minimized by the experienced staff and personal protective equipment.



In the safety of the SRERC lab, Alexia Mortensen turns her silver coin to gold.

The goal of science is the same whether it be in high school or at a research center. Ask a question. Research information. Design an experiment which provides data. Make inferences based on data. Adapt. That is why the short partnership between EHS and SRERC is important. We share common goals.